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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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			ART UNIT	PAPER NUMBER
			2142	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,418

Applicant(s)

CLARK ET AL

Examiner

Benjamin A Ailes

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-27 have been examined.

Drawings

2. The drawings received on 26 February 2002 are not acceptable for examination proceedings. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the text is illegible, sloppy, and cramped. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and within the top margin.

Art Unit: 2142

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7-8, 14-16, 19-20, and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Cote et al. (U.S. 6,021,262), hereinafter referred to as Cote.

5. Regarding claim 1, Cote discloses a distributed processing environment, comprising:

A client computer platform (col. 1, lines 9-18);

A plurality of server computer platforms, each one of said plurality of server computer platforms having an instance of an application residing thereon (col. 1, lines 9-18);

A messaging system for controlling the exchange of messages between said client computer platform and said plurality of server computer platforms, said messaging system including messaging services residing at said client computer platform and each one of said plurality of server computer platforms (col. 1, line 66 – col. 2, line 15); and

A time-distributed load balancing system residing at said client computer platform, said time-distributed load balancing system determining, for a message to be transferred to said application by said messaging system, which one of said plurality of server computer platforms is to receive said message based upon a time associated with said message and at least one message distribution rule requiring transfer of said message to a selected one of said plurality of server computer platforms if said time associated with said message falls within a corresponding one of a plurality of pre-determined time spans (col. 2, lines 25-36).

6. Regarding claim 14, Cote discloses a distributed processing environment, comprising:

A client computer platform (col. 1, lines 9-18);

A plurality of server computer platforms, each one of said plurality of server computer platforms having an instance of an application residing thereon (col. 1, lines 9-18);

A messaging system for controlling the exchange of messages between said client computer platform and said plurality of server computer platforms, said messaging system including message services residing at said client computer platform and each one of said plurality of server computer platforms (col. 1, line 66 – col. 2, line 15);

A time-distributed load balancing and failover system residing at said client computer platform, said time-distributed load balancing and failover system determining, for a message to be transferred to said application by said messaging system, which one of said plurality of server computer platforms is to receive said message based upon a time associated with said message, at least one message distribution rule requiring transfer of said message to a selected one of said plurality of server computer platforms if said time associated with said message falls within a corresponding one of a plurality of pre-determined time spans and at least one failover rule requiring transfer of said message to a subsequent one of said plurality of server computer platforms associated with a subsequent one of said plurality of pre-determined time spans if said selected server computer platform has failed (col. 2, lines 25-36 and col. 3, lines 15-20).

7. Regarding claim 2, in accordance with claim 1, Cote discloses the distributed processing environment wherein said time associated with said message is an arrival time for said message at said messaging service residing at said client computer platform (col. 3, lines 10-14).

Art Unit: 2142

8. Regarding claims 3 and 15, in accordance with claims 1 and 14, Cote discloses the distributed processing environment wherein:

Said time associated with said message includes a value for a first unit of time and a value for a second unit of time (col. 3, lines 15-20, and col. 4, line 61 – col. 5, line 15); and

Each one of said plurality of pre-determined time spans encompassing a contiguous range of values for said second unit of time (col. 4, line 61 – col. 5, line 15).

9. Regarding claim 4, in accordance with claim 3, Cote discloses the distributed processing environment wherein:

Using said at least one message distribution rule, said time-distributed load balancing system divides said first unit of time into said plurality of pre-determined time spans and associated each one of said plurality of pre-determined time spans to said corresponding one of said plurality of server computer platforms (col. 7, lines 8-19); and

Said time-distributed load balancing system determining which of said plurality of server computer platforms is to receive said message based upon which, of said plurality of pre-determined time spans, said value of said second unit of time associated with said message falls within (col. 7, lines 28-34).

10. Regarding claims 7 and 19, in accordance with claims 4 and 16, Cote discloses the distributed processing environment wherein said time-distributed load balancing system residing at said client computer platform further comprises:

A data file for maintaining a list of said plurality of server computer platforms, said pre-determined time span associated with each one of said plurality of server computer

Art Unit: 2142

platforms and said contiguous range of values for said second unit of time encompassed by said pre-determined time span associated with each one of said plurality of server computer platforms (col. 6, lines 48-59); and

A software application which implements said at least one message distribution rule by determining which one of said plurality of server computer platforms is to receive said message by comparing said value of said second unit of time associated with said message to said contiguous range of values encompassed by each one of said plurality of pre-determined time spans maintained in said data file (col. 7, lines 28-34).

11. Regarding claim 8, in accordance with claim 7, Cote discloses the distributed processing environment wherein said software application resides within said messaging service residing at said client computer platform (col. 1, line 66 – col. 2, line 15).

12. Regarding claim 16, in accordance with claim 15, Cote discloses the distributed processing environment wherein:

Using said at least one message distribution rule, said time-distributed load balancing failover system divides said first unit of time into said plurality of pre-determined time spans, associated each one of said plurality of pre-determined time spans with a corresponding one of said server computer platforms and arranges said plurality of pre-determined time spans into a self-repeating sequence (col. 2, lines 25-36).

Said time distributed load balancing and failover system determining which of said plurality of server computer platforms is to receive said message based upon which

one, of said plurality of pre-determined time spans, said value of said second unit of time associated with said message falls within (col. 7, lines 28-34);

Using said at least one failover rule, if said server computer platform associated with said pre-determined time span within which said value of said second unit of time associated with said message falls within has failed, said time distributed load balancing and failover system selecting, as said subsequent server computer platform to receive said message, said server computer platform associated with a next pre-determined time span in said self-repeating sequence of said pre-determined time spans (col. 4, lines 30-39).

13. Regarding claim 20, in accordance with claim 19, Cote discloses the distributed processing environment wherein said software application implements said at least one failover rule by determining that, if said server computer platform associated with said pre-determined time span within which said value of said second unit of time associated with said message falls within has failed, said server computer platform associated with said next pre-determined time span in said self-repeating sequence of said pre-determined time span in said self-repeating sequence of said pre-determined time spans is to receive said message (col. 4, lines 30-39).

14. Regarding claim 23, Cote discloses a distributed processing environment, comprising:

A client computer platform (col. 1, lines 9-18);

A plurality of server computer platforms coupled to said client computer platform (col. 1, lines 9-18);

An asynchronous messaging system for controlling the exchange of messages between said client computer platform and said plurality of server computer platforms, said asynchronous messaging system including asynchronous messaging services residing at said client computer platform and each one of said plurality of server computer platforms (col. 1, line 66 – col. 2, line 15).

At least two instances of each one of a plurality of applications distributed among said plurality of server computer platforms, said at least two instances of each one of said plurality of applications residing at respective ones of said plurality of server computer platforms (col. 1, lines 9-18);

A plurality of data files residing at said client computer platform, each one of said plurality of data files corresponding to one of said plurality of applications (col. 6, lines 48-59);

Each one of said plurality of data files maintaining:

A list of each one of said at least two instances of said corresponding one of said plurality of applications and said respective ones of said plurality of server computer platforms on which they reside (col. 6, lines 48-59);

A pre-determined time span assigned to each one of said at least two instances of said corresponding one of said plurality of applications and said respective ones of said server computer platforms on which they reside, for each of said respective ones of said plurality of server computer platforms, said pre-determined time spans assigned to said corresponding one of said at least two instances of said corresponding one of said plurality of applications arranged in a self-repeating sequence, collectively

Art Unit: 2142

comprise a first unit of time and respectively encompass a contiguous range of values for a second unit of time (col. 7, lines 28-34); and

A load rebalancing and failover software application residing at said client computer platform (col. 2, lines 25-36);

For each message to be delivered to a first one of said plurality of applications distributed among said plurality of server computer platforms, said load balancing and failover software application (col. 3, lines 10-14);

Determining an arrival time of said message at said asynchronous messaging service of said client computer platform, said arrival time of said message including a first value for said first unit of time and a second value for a second unit of time (col. 3, lines 10-14); and

Selecting, as said server computer platform to receive said message, said server computer platform corresponding to said pre-determined span of time assigned to said instance of said application for which said second value for said arrival time falls within said contiguous range of values (col. 4, lines 61 – col. 5, line 15).

15. Regarding claim 24, in accordance with claim 23, Cote discloses the distributed computing environment wherein:

Each one of said data files further maintains an indication as to whether each one of said at least two instances of said corresponding one of said plurality of applications has failed (col. 6, lines 48-59);

For each message to be delivered to said first one of said distributed applications, said load balancing and failover software application:

Determining, from said list, if said selected server computer platform has failed (col. 6, lines 48-59); and

If said selected server computer platform has failed, selecting, as a substitute server computer platform, said server computer platform associated with a next pre-determined time span in said self-repeating sequence of said pre-determined time spans (col. 5, lines 10-24);

Repeating said determining and selecting actions until said selected computer platform is not determined to have failed or until all of said server computer platforms have been selected and determined to have failed (col. 5, lines 10-24).

16. Regarding claim 25, Cote discloses the distributed processing environment wherein for each re-registration of one of said plurality of server computer platforms with said asynchronous messaging system residing at said client computer platform, said load balancing and failover software application removing said failure indication from each of said listed instances of said plurality of applications residing on said re-registering server computer platform (col. 5, lines 1-15 and col. 6, lines 48-59).

17. Regarding claim 26, in accordance with claim 25, Cote discloses the distributed processing environment further comprising:

A synchronous messaging service residing on each one of said plurality of server computer platforms, said synchronous messaging service handling the exchange of messages between said asynchronous messaging service residing on said server computer platform and said instances residing on said server computer platform (col. 1, lines 19-28 and col. 2, lines 25-36);

Said asynchronous messaging service reporting first and second types of responses from said server computer platform selected to receive said message, said first type of message confirming receipt of said message by said messaging service at said selected server and said second type of message confirming receipt of a response to said message (col. 2, lines 25-36 and col. 3, lines 10-20);

Said load balancing and failover software application:

Determining, upon failing to receive said first type of message within a pre-selected period, that all said instances of said plurality of applications residing at said selected server computer system have failed (col. 3, lines 10-20); and

Determining, upon failing to receive said second type of message within said pre-selected time period, that said selected instance of said application residing at said selected server computer system has failed (col. 3, lines 10-20).

18. Regarding claim 27, in accordance with claim 25, Cote discloses the distributed processing environment further comprising:

A synchronous messaging service residing on each one of said plurality of server computer platforms, said synchronous messaging service handling the exchange of messages between said asynchronous messaging service residing on said server computer platform and said instances residing on said server computer platform (col. 1, lines 19-28 and col. 2, lines 25-36);

Said asynchronous messaging service reporting first and second types of responses from said server computer platform selected to receive said message,

Art Unit: 2142

said first type of message confirming receipt of said message by said messaging service at said selected server and said second type of message confirming receipt of a response to said message (col. 2, lines 25-36 and col. 3, lines 10-20);

Said load balancing and failover software application:

Determining, upon failing to receive said first type of message within a pre-selected period, that all said instances of said plurality of applications residing at said selected server computer system have failed (col. 3, lines 10-20); and

Determining, upon failing to receive said second type of message within said pre-selected time period, that said selected instance of said application residing at said selected server computer system have failed (col. 3, lines 10-20).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 5, 10, 11, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cote in view of Levac et al. (U.S. 5,872,926), hereinafter referred to as Levac.

21. Regarding claims 5, 10, 11, 17, and 21, Cote discloses the use of having thresholds being units of time (col. 4, line 61 – col. 5, line 1) but is silent on assigning

Art Unit: 2142

thresholds being in units of seconds. However in related art, Levac discloses a messaging system utilizing the use of variable time intervals being assigned as parameters to messages. The time intervals being measured in minutes and seconds (col. 3, lines 39-44 and col. 4, line 10). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious to assign time intervals in both minutes and seconds in order to ensure the proper transmission of messages to selected communication devices in specified amounts of time (see Levac, col. 3, lines 39-44 and Cote, col. 4, lines 63-65).

22. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cote in view of Cogger et al. (U.S. 6,032,184), hereinafter referred to as Cogger.

23. Regarding claim 9, Cote discloses the use of client computer and server computer systems and the method of having the ability of sending different types of messages between the client and the servers being asynchronous or synchronous, but does not disclose the client being a mainframe computer system and the server computer platforms being mid-range server computer systems. However in related art, Cogger discloses a messaging system wherein messages can be sent between client mainframe computer systems and mid-range server computer systems (col. 1, lines 34-40 and col. 8, lines 34-38). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious to utilize the messaging system disclosed by Cote in combination with the method of asynchronous messaging between mainframe computers and mid-range servers as disclosed by Cogger. One of ordinary skill in the art would have been motivated to make such a combination because the use of

Art Unit: 2142

mainframe computers and mid-range servers are well known in the computer networking industry to insure high availability rates (see Cogger, col. 1, lines 23-39).

24. Claims 6, 12, 13, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cote.

25. Regarding claims 6, 18, and 22, Cote discloses the distributed processing environment, wherein said time associated with said message is an arrival time for said messaging service residing at said client computer platform (col. 3, lines 10-14).

26. Regarding claim 12, Cote discloses the distributed processing environment wherein said time associated with said message is an arrival time for said message at said messaging service for said client computer platform (col. 3, lines 10-14).

27. Regarding claim 13, Cote discloses the distributed processing environment wherein said software application resides within said messaging service residing at said client computer platform (col. 1, line 66 – col. 2, line 15).

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kamerman et al. (U.S. 5,519,834) disclose a method of transmitting selected message frames without individual destination address in non-overlapping sequential time intervals from host computer to terminals via bridges and retransmitting thereafter.

Baek et al. (U.S. 2002/0194333) disclose a message transmission method and system capable of balancing load.

Smith (U.S. 5,835,724) discloses a system and method for communication information using the Internet that receives and maintains information concerning the client and generates and conveys the session data to the client.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes, whose telephone number is (571)272-3899. The examiner can normally be reached on Monday-Friday (7:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached at (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is (703)872-3906.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [benjamin.ailes@uspto.gov].

Art Unit: 2142

All Internet e-mail communications will be made of record in the application file.

PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Benjamin Ailes
Patent Examiner
Art Unit 2142


KAMINI SHAH
PRIMARY EXAMINER